Omega Cabinetry

CASE SUMMARY 16

OMEGA CABINETRY, LTD.

Waterloo, Iowa
Black Hawk County

Intern: Jeff Kloster
Major: Mechanical Engineering
School: Iowa State University

The Company

Omega Cabinetry, Ltd. is a leading manufacturer of custom and semi-custom all-wood cabinets for bath, kitchen, and the entire home. In 2002, Omega became part of the second largest cabinetry manufacturer in the world, MasterBrands Inc., a division of Fortune Brands.

Project Background

Omega Cabinetry, Ltd. currently recycles all cardboard, office paper, liquid wastes, metals and a good portion of wood scrap. However, Omega does not track these waste streams nor has much information regarding how they are handled. No clear indication as to who is responsible for these waste streams was available at the beginning of the internship.

Incentives to Change

Omega Cabinetry desired to reduce its overall impact on the environment through improved awareness and accountability. Omega wished to reduce the amount of Volatile Organic Compounds (VOCs) produced, streamline waste management operations, and reduce the total quantity of material landfilled.

Results

There were five opportunities for operational cost savings and reducing Omega's overall environmental impact.

1. Waste Management System (WMS): Prior to the internship, Omega did not maintain a centralized tracking system for waste materials leaving the main campus. This presented several concerns, including: the inability to measure improved process controls or manufacturing techniques as no comparison data existed; no budget or cost control for waste management; and limited data was available to reflect the total impact the company had on the environment. By establishing a WMS, Omega has taken the first step in increasing awareness and has provided itself with an invaluable tool for the future. During an August 2003 visit by the environmental division of MasterBrands Cabinetry Inc., the parent company of Omega Cabinetry, a presentation on the WMS was provided. Representatives from MBCI received a working copy of the system and will be distributing it to its other 18 subsidiaries for use.

2. Wood Waste Logistical Issues: The WMS system immediately provided information on several areas of concern. One of these areas was the status of Omega's wood recycling

program. At present, Omega recycles 92.5 percent of all wood scrap generated during production. The remaining 7.5 percent is landfilled, but is compositionally identical to the recycled wood scrap. Investigations into why Omega was landfilling recyclable wood were conducted and several modifications have occurred, both to machinery and daily operations, to correct this issue.

3. Pallets: Until 2002, Omega recycled all of its unusable pallets with a local company. That relationship, for market reasons, was discontinued. Omega generates approximately 300 pallets/month and is currently landfilling them. A new recycler has been identified and the pallet recycling program should begin by the end of August 2003.

4. Shrink-wrap: Omega uses shrink-wrap to secure components during transport between buildings and production processes. Studies were conducted and it is recommended that a recycling program be implemented. City Carton of Cedar Falls is willing to provide two hand balers free of charge for 60 days to allow Omega to further quantify this waste stream. At the end of that period, Omega has the option to purchase, upgrade, or discontinue the program. By removing the material from the general trash compactors, Omega should improve compactor densities and reduce the total number of pulls required, thus further reducing the economic impact of the trash waste stream.

5. Dynasty Cefla and Roll Coater: The implementation of a roll coating clear application system to augment an already existing production process will effectively reduce the total amount of VOCs by more than 20 percent. The new system uses ultraviolet (UV) curing technology and thus requires a gradual conversion to UV compatible stains and sealers. That conversion, however, is highly advantageous from an environmental standpoint as UV compatible stains contain fewer pounds of VOCs per gallon and create less overall waste per gallon used.

Based on observations, energy consumption is potentially the largest future opportunity for Omega in terms of pollution prevention and cost savings. It is recommended that an energy audit be conducted at some time in the near future. Through the replacement of lights and ballasts, installation of electronically controlled blast gates on the dust collection system, variable speed drives, and repairing leaks in the compressed air lines, Omega may be able to reduce its total energy consumption by as much as 20-40 percent.

Project Summary Table

Pollution prevention opportunity	Waste reduction (lb/year)	Cost savings (per year)	Status
Waste management system	---	---	Implemented
Diversion of landfilled wood scrap to Midwest Sawdust	2,800,000	$75,000	Implemented
Roll-coater capital expenditure	70,500 (VOC)	$110,300*	Implemented
Shrink-wrap recycling	200,000	$6,000	Recommended
Pallet recycling	162,000	$3,000	Implemented
TOTALS	3,232,500	$194,300	

* figure result of raw materials reduction